

REMARKS

Applicants submit this Response to Office Action in response to the Office Action mailed on May 17, 2010 (non-final). Reconsideration is respectfully requested.

1. Status of the Claims

Claims 1-3 have been rejected. Claim 4 has been objected to as being dependent upon a rejected base claim, and the Examiner has indicated that claim 4 would be allowable if re-written in independent form including all of the limitations of the base claim and any intervening claims. Claims 1, 4, 6 and 9 are amended herein, and claims 5-13 have been withdrawn. No new matter is added by these amendments. After entry of the foregoing amendments, claims 1-4 are pending in this application.

2. Amendments to the Specification

Applicants have amended paragraph [0011] of the specification to include a description of FIGS. 5-6. Applicants respectfully submit that no new matter is introduced by way of the proposed amendments to the specification, and prompt entry thereof is respectfully requested.

3. Claim Amendments

Applicants respectfully submit that no new matter is introduced by way of the foregoing claim amendments. Independent claim 1 has been amended to more clearly recite the subject matter associated with the present disclosure. Support for the amendments to independent claim 1 can be found in the specification, as originally filed, particularly with reference to paragraphs [0020] to [0025]; and Figures 1-4 and the associated text. Applicants have also amended pending dependent claim 4 and withdrawn dependent claims 6 and 9 as suggested by the Examiner.

As amended, claims 1-4 are pending in the present application. Applicants respectfully submit that no new matter is introduced by way of applicants' proposed claim amendments, and prompt entry thereof is respectfully requested.

4. Objection to the Drawings

The Examiner has indicated that new corrected drawings are required because the counter-cutting device 4, sleeve 5, slits 7, blade 8 and cylindrical core 18 are not shown in

enough detail or clear enough for the Examiner to understand what each of these parts are and what they do. As such, applicants have respectfully submitted new FIGS. 5-6. As noted above, FIG. 5 shows an enlarged view of a core and blade of the cutting unit of FIG. 1, and FIG. 6 shows an enlarged view of a counter-cutting device of the cutting unit of FIG. 1. More particularly, FIG. 5 shows in detail an enlarged view of a core 18 and a blade 8 of cutting drum 15 of cutting unit 1. As noted in paragraph [0015], the core 18 is adjustable angularly about axis 19. With respect to FIG. 6, this Figure shows in detail an enlarged view depicting the continuous rods 3 which are fed simultaneously at a given speed to a counter-cutting device 4 forming part of cutting unit 1 and defined in known manner by two sleeves 5, which move back and forth in a traveling direction 6 of continuous rods 3, and have respective slits 7 lying in the same plane, crosswise to direction 6, and engaged successively by a known blade 8 of cutting unit 1 (see also applicants' disclosure at para. [0013]).

Moreover, the Examiner has asserted that the first axis extending through the counter-cutting device as disclosed in claim 1, and the curved lateral surface being coaxial with the first axis as disclosed in claim 4 must be shown or the features canceled from the claims. Applicants respectfully submit that FIG. 1 shows the adjustment axis (indicated by reference numeral 20) through the counter-cutting device 4. More particularly, in FIG. 1, the adjustment axis 20 overlaps the axis 19 of the radial core 18 fitted with the radial blade 8, thus the two axes are not (and cannot be) distinguishable one from the other and are represented by the same line (as presently shown in FIG. 1). Applicants also respectfully submit that the curved lateral surface (indicated by reference numeral 34) of the cutting head 12 and supporting the scale 33 is well shown in FIGS. 2-3. Moreover, applicants have amended claim 4 to more clearly recite that the "cutting head (12) further comprises a curved lateral surface (34) and a circle formed by the curved lateral surface (34) has an axis that is coaxial with said first axis (20)," as suggested by the Examiner.

For at least these reasons, applicants respectfully submit that FIGS. 5-6 be entered as requested by the Examiner and that the objections to the drawings be withdrawn.

5. Art-Based Rejections

The outstanding Office Action sets forth rejections under 35 USC §103(a), as follows:

Claims 1 and 2 are rejected under 35 USC §103(a) as being unpatentable over Seragnoli (USPN 4,398,438) [hereinafter “Seragnoli”] in view of Romo et al. (US 2004/0154448) [hereinafter “Romo”], or over Ceroll et al. (USPN 6,820,524) [hereinafter “Ceroll”] in view of Pollock et al. (USPN 7,191,690) [hereinafter “Pollock”]; and claim 3 is rejected under 35 USC §103(a) as being unpatentable over the modified device of Seragnoli in view of Miller et al. (USPN 4,220,077) [hereinafter “Miller”].

Applicants respectfully traverse the rejections and submit that the above claims are patentable over Seragnoli, Romo, Ceroll, Pollock and/or Miller, whether taken alone or in combination, or in combination with the other art of record. Reconsideration of the foregoing Section 103 rejections in view of the claim amendments and remarks set forth herein is respectfully requested.

In order to establish obviousness, all elements of the claims must be disclosed, taught or suggested by the prior art. More particularly and as the Examiner is aware, the factual inquiries for establishing a prima facie case of obviousness under 35 U.S.C. §103 are set forth in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). These factors include (1) determining the scope and content of the prior art, (2) ascertaining the differences between the prior art and the claims at issue, (3) resolving the level of ordinary skill in the pertinent art, and (4) considering objective evidence present in the application indicating obviousness or nonobviousness. Applicants respectfully submit that a prima facie case of obviousness may not be established for the currently pending claims, as amended, because the claims -- when viewed as a whole -- include elements and limitations not disclosed or made obvious by the prior art.

In regards to independent claim 1, applicants respectfully traverse the §103 rejections based upon Seragnoli, Romo, Ceroll and/or Pollock. Applicants respectfully submit that independent claim 1, as amended, patentably distinguishes over Seragnoli, Romo, Ceroll and/or Pollock because, *inter alia*, applicants’ claimed cutting unit for cutting continuous cigarette rods fed in a given traveling direction (6) includes:

- “motorized locking means (24) for angularly locking the cutting head (12) in position on said supporting body (9); said motorized locking means (24) including automatic release means (48) provided with an actuator (53) for releasing the cutting head (12) with respect to the supporting body (9);” and

- “motorized actuating means (27, 31, 32) that are separated and independent from the motorized locking means (24) and interposed between the supporting body (9) and the cutting head (12) to rotate the cutting head (12) about said first axis (20) to vary said angle.”

Applicants note that Seragnoli, Romo, Ceroll and/or Pollock fail to teach or suggest a cutting unit that at least includes these noted features, structures and/or functionalities.

With respect to the teachings of Romo, this reference teaches (para. 58, FIGS. 18-20) a detent system 295 that allows the turntable 230 and the attached cutting tool 210 to be pre-set to specific angles relative to the fixed fence 221. The detent system 295 includes a screw-type handle 233 that is engaged with the base 200. It is evident that the screw-type handle 233 is used manually by the operator and in the same way also the rotation of turntable 230 is performed manually by the operator of the table saw 10. In other words, the table saw does not have any kind of actuator (for example, electric motors) for moving the turntable 230 to set the turntable 230 at a desired angle, rather, all of the operations (e.g., unlocking of the turntable 230, rotating the turntable 230, locking the turntable 230) are performed manually by the operator of the table saw.

Turning to the Ceroll patent, this reference teaches (e.g., col. 5, lines 17-64 and FIGS. 3-4) a locking system 36 including a locking arm cam 68. When the desired angle of saw blade 22 is obtained, locking system 36 is activated by pivoting locking arm 64 on locking rod 62 which rotates cam 68 with respect to cam 66. It is evident that the locking arm 64 is pivoted manually by the operator of the table saw 10 and in the same way also the rotation of saw blade 22 is performed manually by the operator of the table saw 10. In other words, the table saw 10 does not have any kind of actuator (e.g., electric motors) for moving the saw blade 22 to set the saw blade 22 at a desired angle, rather, all the operations (e.g., unlocking of the saw blade 22, rotating the saw blade 22, locking the saw blade 22) are performed manually by the operator of the table saw 10. Thus, owing to the above, Romo and/or Ceroll (singly or in combination) fail to disclose, teach or even suggest a **motorized locking means provided with an actuator**, recited in applicants' independent claim 1, as amended.

In regards to the teachings of Seragnoli, this reference teaches that to adjust the angle, the cutting head is mounted to rotate, with respect to a support, about an adjustment axis through the counter-cutting device, perpendicular to the axis of rotation of the cutting drum, and crosswise to the traveling direction of the continuous rod, and can be locked releasably in any desired angular position about the adjustment axis.

In Seragnoli, locking, releasing and rotating the cutting head about the adjustment axis calls for a series of manual operations. In particular, in Seragnoli, the rotation of the cutting head is completely done by manual operation (i.e., an operator pushes with his/her hands onto the cutting head to rotate the cutting head). Thus, Seragnoli does not disclose any actuating means which are motorized or could be motorized.

Applicants presently claimed advantageous cutting unit includes, *inter alia*, combining a motorized actuating device which rotates the cutting head, with an automatically releasable locking device which is different and separate from the actuating device and locks the cutting head. Such combination is not disclosed, taught or even suggested in the cited prior (alone or in combination).

In other words, the necessity of combining a motorized actuating device which rotates the cutting head, with an automatically releasable locking device which is different and separate from the actuating device and locks the cutting head is not disclosed or even suggested in any one of the cited prior art documents.

The objective technical problem advantageously solved by applicants' presently claimed cutting unit is to improve the adjusting of the cutting angle by eliminating manual operations and by increasing the precision of the adjustment. Simply stated, the devices/methods disclosed in Seragnoli, Romo, Ceroll, Pollock and/or Miller -- whether taken alone or in combination -- do not and cannot achieve such improvement of adjusting the cutting angle by eliminating manual operations and by increasing the precision of the adjustment as is achieved by applicants' claimed unit.

For eliminating manual operations, one solution is to motorize the rotation of the slide or guide device 21, i.e., to provide a motor mechanically connected to the slide 21. In other words, by modifying the cutting unit disclosed in Seragnoli, for example, in view of the teachings of Pollock, one skilled in the art would obtain a cutting unit as disclosed in Seragnoli and further

including a motor mechanically connected to the slide. However, this modified cutting unit would have a further problem: the cut would not be perfectly crosswise to the axis of the continuous rod at all times. The solution to this further problem is recited in applicants' independent claim 1, as amended -- the presence of a locking device, which is **different and independent from** the actuating means and is designed for angularly locking the cutting head in position on the supporting body. In other words, the claimed subject matter recited in applicants' independent claim 1 is not just to put a motor for motorizing a movement previously done by hand, but to advantageously combine a motorized actuating device which rotates the cutting head with an automatically releasable locking device which is different and independent from the actuating device and locks the cutting head. Stated another way, in the cutting unit recited in independent claim 1, the action of the locking device, which is different (thus "separate and independent") from the actuating device, locks the cutting head independently from the actuating device and thus guarantees that in use the cutting head and the cutting drum cannot and do not rotate (e.g., even very small rotations). In this way, the blades follow precisely the ideal path and thus the cut is perfectly crosswise to the axis of the continuous rod at all times.

None of the cited prior art documents show or suggest the contemporaneous presence of actuating means and with an automatically releasable locking means different and independent from the actuating means.

In the cutting unit disclosed in Pollock, the actuator 12 has the function of an actuating device and also has the function of a locking device, i.e., it is also used to block rotation of the subframe 9. However, even if the rotation of the actuator 12 is blocked, the subframe 9 still does small movements because of the plays of the transmission mechanically connecting the actuator 12 to the subframe 9. These movements are typically very small and thus are generally acceptable in most of the cutting operations, but not in the cutting of continuous cigarette rods in a cigarette maker machine. Thus, in the cutting unit recited in applicants' independent claim 1, the action of the locking device, which is separate and independent from (unlike Pollock) the actuating device, locks the cutting head independently from the actuating device and thus guarantees that in use the cutting head and the cutting drum cannot do any rotation, even very small rotations. In this way, the blades follow precisely the ideal path and thus the cut is perfectly crosswise to the axis of the continuous rod at all times.

Applicants respectfully submit that one skilled in the art would not find any suggestion in the cited prior art to modify the cutting unit disclosed in Pollock to obtain the cutting unit recited in applicants' independent claim 1 (i.e., of combining a motorized actuating device which rotates the cutting head with a releasable locking device which is **separate and independent from** the actuating device and locks the cutting head. Such combination is not disclosed or even suggested in the cited art.

Thus, one skilled in the art would find nothing in either Seragnoli, Romo, Ceroll and/or Pollock alone or in combination that would suggest or any reason for making the cutting unit of applicants' claim 1, as amended. Moreover, there is no motivation taught in either reference to combine the references.

In order to reach the applicants' claimed subject matter of independent claim 1, one would have to completely disregard the teachings given in the cited art. As noted, the cited art does not disclose, teach or suggest the contemporaneous presence of actuating means and with an automatically releasable locking means different and independent from the actuating means. There would be no reason to disregard these teachings without using applicants' own disclosure as a template, and no such suggestion is found in the references in any event. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. MPEP §2143. There is no discussion, suggestion and/or disclosure at all in the cited art, alone or in combination, of a cutting unit having, *inter alia*, "motorized locking means (24) for angularly locking the cutting head (12) in position on said supporting body (9); said motorized locking means (24) including automatic release means (48) provided with an actuator (53) for releasing the cutting head (12) with respect to the supporting body (9);" and "motorized actuating means (27, 31, 32) that are separated and independent from the motorized locking means (24) and interposed between the supporting body (9) and the cutting head (12) to rotate the cutting head (12) about said first axis (20) to vary said angle," as recited in applicants' independent claim 1, as amended. Accordingly, independent claim 1 is patentable over the cited art.

For at least the foregoing reasons, applicants respectfully submit that independent claim 1, as amended, patentably distinguishes over Seragnoli, Romo, Ceroll and/or Pollock, whether taken alone or in combination with each other or the other art of record. In addition, applicants respectfully submit that

dependent claims 2-4, which depend directly or indirectly from independent claim 1, patentably distinguish over Seragnoli, Romo, Ceroll, Pollock and/or Miller, whether taken alone or in combination with each other or the other art of record, for at least the reasons noted with respect to independent claim 1.

Moreover, applicants respectfully request that the Examiner reconsider and rejoin previously withdrawn claims 5-13 as depending directly or indirectly from allowable independent claim 1. See, MPEP 821.04(a):

Where restriction was required between independent or distinct products, or between independent or distinct processes, and all claims directed to an elected invention are allowable, any restriction requirement between the elected invention and any nonelected invention that depends from or otherwise requires all the limitations of an allowable claim should be withdrawn. For example, a requirement for restriction should be withdrawn when a generic claim, linking claim, or subcombination claim is allowable and any previously withdrawn claim depends from or otherwise requires all the limitations thereof.

Based on the dictates of MPEP 821.04(a), applicants respectfully submit that rejoinder is proper. Upon rejoinder, applicants respectfully submit that such claims are allowable for at least the reasons noted with respect to the underlying independent claim 1.

CONCLUSION

Accordingly, for at least the stated reasons, claims 1-13 are believed to be neither taught nor suggested by Seragnoli, Romo, Ceroll, Pollock and/or Miller and, therefore, are neither anticipated by, nor rendered obvious in view of, Seragnoli, Romo, Ceroll, Pollock and/or Miller, whether taken alone or in combination with one another, or in combination with the other art of record. Reconsideration and prompt allowance of all pending claims is respectfully requested. If the examiner believes that a telephone conversation may be useful in advancing prosecution of the application, the examiner is invited to contact applicants' undersigned counsel.

Respectfully Submitted,

A handwritten signature in black ink, appearing to read 'Aaron' followed by a stylized monogram or set of initials.

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